

Remarks

Applicant has amended the Summary of the Invention as filed by deleting it in its entirety and replacing it with a Summary of the new independent claims added by this amendment. Applicant submits for the reasons discussed below with respect to the new independent claims as to why those claims do not introduce new matter that the amended Summary does not introduce new matter.

Applicant has amended the specification as filed as follows:

(a) The paragraph that starts at line 15 on page 7 to add thereto a sentence after the first sentence that identifies as an example that Detection cells 30, 32, 34 and 36 as forming the detection zones. Applicant submits that this sentence does not introduce new matter as the Detection cells are defined at line 7 of the paragraph that begins at line 1 on page 7 and the first sentence of the paragraph that starts at line 15 on page 7 recites that a zone is a collection of possibly connected or disconnected cells of the same type and clearly cells 30, 32, 34 and 36 are all of the same type as they are Detection cells.

(b) the two paragraphs that start at line 19 on page 10 and end at 6 on page 11 to add "detection" between "zone" and "logic" in line 20 on page 10 and to add "time" after "veto" in line 4 on page 11. These changes do not introduce new matter as the label in Fig. 5 for the logic shown therein is "Zone Detection Logic" and the paragraph that begins at line 19 on page 10 describes Fig. 5 and line 4 on page 11 is describing block 76 of Fig. 6 which block is identified in that figure by the words "Wait for time delay."

Applicant has amended the claims by canceling original claims 1-6 and 11-20 and inserting in place thereof new claims 21-39. This application as filed had 20 total claims of which four were independent and after entry of this amendment will have 23 total claims of which five are independent. The additional fee of \$142 for the one independent claim in excess

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of the four paid for when this application was filed and the three total claims in excess of 20 is to be charged to deposit account 05-0877 as set forth in the transmittal letter for this amendment.

New independent claim 21 teaches the art a method to analyze a time sequence of images in which a reference image is divided based on its visual content into:

first spatially fixed areas of each image in said time sequence of images to analyze for detection by selecting in said reference image one or more detection cells collectively comprising a detection zone in which a statistically significant change in one or more predetermined features in said time sequence of images to be analyzed is expected to occur; and

second spatially fixed areas of each image in said time sequence of images to veto a detection of a statistically significant change in one or more predetermined features in said time sequence of images by selecting in said reference image one or more veto cells collectively comprising a veto zone in which any detection in said veto zone of a statistically significant change in one or more predetermined features in said time sequence of images is used to disable any detection of a statistically significant change in said one or more predetermined features in said time sequence of images in said detection zone.

Applicant submits that new claim 21 does not introduce new matter as applicant as filed states in several places including the title, the abstract, page 13, line 35 and page 14, line 5 that a time sequence of images is analyzed by the present invention. Further the selecting of the one or more detection cells that comprise a detection zone and the one or more veto cells that comprise a veto zone and that such cells are in spatially fixed areas in the reference image is described in the application as filed starting at line 1 on page 7 and in Fig. 3.

New independent method claims 34 and 35 are very similar to original independent method claims 2 and 3 and use the same

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language as that used in new independent claim 21 and thus do not introduce new matter. New independent apparatus claim 36 is fully supported by Fig. 1 of the application as filed and the reasons given above why new independent claim 21 does not introduce new matter. New independent apparatus claim 39 is fully supported by Fig. 1, the flowcharts of Fig. 4 et seq. and the reasons given above why new independent claim 21 does not introduce new matter. Therefore new independent apparatus claims 36 and 39 do not introduce new matter.

Applicant has added new claims 22-33 which depend on new independent claim 21. New claim 22 calls for dividing the reference image into zero or more ignore cells which is fully supported by the application as filed. New dependent claims 23 and 24 are supported by lines 2-5 on page 8 of the application as filed. New claims 25-26 are fully supported by the paragraph at line 15 on page 7 of the application as filed. New claim 27 is fully supported by page 7, lines 34-36 of the application as filed. New claims 30-33 are fully supported by the description in the application as filed of the functioning of the present invention.

The Objection to the Claims

The Examiner has objected to independent claims 1, 2 and 3 because of informalities having to do with the identifier for the subparagraphs in each claim. Applicant has canceled independent claims 1-3 without prejudice. New independent claims 21, 34-36 and 39 do not have the informalities of the canceled independent claims and applicant requests reconsideration of this objection to the independent claims.

The Rejection of the Claims

The Examiner has rejected claims 1, 2 and 3, which are all of the independent claims as well as dependent claims 4-10 and 18-20 under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,627,907 (Gur et al.). In support thereof the Examiner says that the abnormal blobs in the image of Gur et al. are read as detection cells because they show up as statistically

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significant changes in an image and the noise blobs of the image in Gur et al. are read as veto cells as these blobs are significant changes in the image but are segmented so that they do not show as abnormal blobs.

Gur et al. describe a method and apparatus for detecting abnormal regions in living tissue depicted in radiographs by digitizing the radiograph and in a first stage using a computer to identify in the digitized radiograph any abnormal regions. A pruning stage removes false positive suspected regions found in the first stage (see the Abstract and column 5, lines 39 et seq.). Thus the method and apparatus of Gur et al. searches the entire image in the digitized radiograph to find the abnormal regions and Gur et al. does not teach, disclose or even suggest the dividing of a reference image into spatially fixed areas of one or more detection cells that comprise a detection zone and one or more veto cells that comprise a veto zone as taught and claimed by applicant in the new independent claims.

Further Gur et al. only analyze a single image or a pair of images (see Fig. 4A and column 9, lines 22 et seq.). Thus Gur et al. do not teach, disclose or even suggest the analysis of a time sequence of images that is taught and claimed by applicant in the new independent claims.

In addition, in Gur et al. a suspect blob can only be rejected if its properties calculated from the pixel values do not meet a rigorous set of rules. In the present invention a zone in a detection area can be identified as a suspect area, that is, it has a statistically significant deviation from prior images, but no further analysis of the region is performed to reject the detection. The identification of that detection zone can only be rejected if a veto zone also has a statistically significant deviation.

Therefore, applicant submits that new claims 21-39 and amended original dependent claim 7-10 which now depend on new independent claim 21 are not anticipated by Gur et al. and reconsideration of that rejection is requested.

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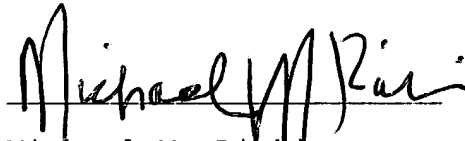
Reconsideration of the application in accordance with Rules 111 and 112 is requested.

Petition and Fee For Extension of Time

Applicant also includes herewith a Petition and Fee For Extension of Time asking that the period to respond to this Action be extended to four months from the date of the mailing of the Action viz., November 1, 2004. As is set forth in the Transmittal Letter to which this Amendment is attached the required fee is to be charged to Deposit Account No. 05-0877.

Respectfully submitted,

Date: 11/1/04



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on the 1st day of November, 2004.

Respectfully, Debra Rietze

Date: November 1, 2004